

ETSI TS 102 721-6 V1.2.1 (2013-08)



Satellite Earth Stations and Systems (SES); Air Interface for S-band Mobile Interactive Multimedia (S-MIM); Part 6: Protocol Specifications, System Signalling

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Contents

Intellectual Property Rights	5
Foreword.....	5
Introduction	5
1 Scope	6
2 References	6
2.1 Normative references	6
2.2 Informative references	6
3 Definitions and abbreviations.....	7
3.1 Definitions	7
3.2 Abbreviations	8
4 General Description.....	9
5 Forward link	9
5.1 Forward link Control Plane Protocol Stack.....	9
5.2 Forward link Signalling.....	10
5.2.1 Forward link signalling for SSA support	10
5.2.1.1 SSA Configuration Table (SCT)	10
5.2.1.2 SSA Access Table (SAT).....	13
5.2.1.3 SSA Dynamic Table (SDT)	14
5.2.1.4 SSA Signalling Load.....	15
5.2.2 Forward link signalling for QS-CDMA support	15
5.2.2.1 QS-CDMA Configuration Table (QSCT)	16
5.2.2.2 QS-CDMA Dynamic Table (QSDT).....	18
5.2.2.3 QS-CDMA Power Correction Table (QSPCT).....	19
5.2.2.4 QS-CDMA Terminal Information Message (QSTIM).....	20
5.2.2.5 Descriptor Coding	21
5.2.2.5.1 Descriptor identification	21
5.2.2.5.2 QS-CDMA Correction Message.....	21
5.2.2.5.3 QS-CDMA RoHC Feedback Message	22
5.2.2.5.4 QS-CDMA Capacity Allocation Hub Req	23
5.2.2.5.5 QS-CDMA Capacity Allocation Ack	23
5.2.2.5.6 QS-CDMA Capacity Release Hub Req	25
5.2.2.5.7 QS-CDMA Capacity Reallocation Hub Req	25
5.2.2.5.8 QS-CDMA Capacity Reallocation Ack	26
5.2.2.5.9 QS-CDMA Handover Ack	27
5.2.2.5.10 QS-CDMA LogOn Ack.....	28
5.2.2.6 Repetition Rates	28
5.2.2.7 Signalling load	28
5.2.3 Forward link signalling for Link Layer support.....	29
5.2.3.1 Link Layer configuration Table (LLCT).....	29
5.2.3.2 Unequivocal ACK	30
5.2.3.3 CRC based ACK	30
5.2.4 Standard section headers.....	31
5.2.4.1 SI section header	31
5.2.4.2 DSM-CC private section header	32
5.2.5 SSA Signalling Considerations for CGC	33
6 Return link.....	34
6.1 Return link Control Plane Protocol Stacks	34
6.2 Return link Signalling	34
6.2.1 QS-CDMA Signalling Unit	34
6.2.2 Descriptor Coding.....	35
6.2.2.1 Descriptor identification.....	35
6.2.2.2 QS-CDMA Logon.....	36

6.2.2.3	QS-CDMA Capacity Allocation Req	37
6.2.2.4	QS-CDMA Capacity Release Req	38
6.2.2.5	QS-CDMA Capacity Reallocation Req.....	38
6.2.2.6	QS-CDMA Handover Req	39
Annex A (normative):	Transport of Forward Link Signalling over DVB-SH.....	40
A.1	S-MIM Map Table	41
A.2	Linkage descriptor (private data)	42
A.3	S-MIM content descriptor	43
History		46

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES).

The present document is part 6 of a multi-part deliverable. Full details of the entire series can be found in part 1 [2].

Introduction

The S-MIM system specified herein is designed to provide:

- Interactive mobile broadcast services.
- Messaging services for handhelds and vehicular terminals, capable of serving millions of terminals due to a novel optimized air-interface in the return link.
- Real-time emergency services such as voice and file transfer, mainly addressing institutional users on-the-move such as fire brigades, civil protection, etc.

Inside the S-band, the 2 GHz MSS band is of particular interest for interactive multimedia, since it allows two-way transmission. Typically, the DVB-SH standard [i.5] is applied for broadcast transmission of user services; ESDR [i.1] or DVB-NGH [i.6] standards are other alternatives. Essential requirements under the R&TTE directive are covered by the harmonized standard EN 302 574 [i.2], [i.3] and [i.4].

The present document supersedes the previous version of the document and is recommended for new implementations. In case DVB-SH is used in the forward link, the changes with respect to the previous version are backward compatible.

The technology applied has been developed in the framework of the ESA funded project "DENISE" (ESTEC/Contract Number 22439/09/NL/US).

1 Scope

The present document specifies the S-MIM (S-band Mobile Interactive Multimedia) system in which a standardized S-band satellite mobile broadcast system is complemented by the addition of a return channel

The present document is part 6 of the standard and concerns aspects of the air interface for the S-band Mobile Interactive Multimedia (S-MIM) system, and in particular it specifies the system signalling.

The other parts are listed in the foreword of part 1 [2].

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

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2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] ETSI EN 300 468: "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems".
- [2] ETSI TS 102 721-1: "Satellite Earth Stations and Systems (SES); Air Interface for S-band Mobile Interactive Multimedia (S-MIM); Part 1: General System Architecture and Configurations".
- [3] ETSI TS 102 721-3: "Satellite Earth Stations and Systems (SES); Air Interface for S-band Mobile Interactive Multimedia (S-MIM); Part 3: Physical Layer Specification, Return Link Asynchronous Access".
- [4] ETSI TS 102 721-4: "Satellite Earth Stations and Systems (SES); Air Interface for S-band Mobile Interactive Multimedia (S-MIM); Part 4: Physical Layer Specification, Return Link Synchronous Access".
- [5] ETSI TS 102 721-5: "Satellite Earth Stations and Systems (SES); Air Interface for S-band Mobile Interactive Multimedia (S-MIM); Part 5: Protocol Specifications, Link Layer".
- [6] IETF RFC 4944: "Transmission of IPv6 Packets over IEEE 802.15.4 Networks".
- [7] ETSI EN 301 790: "Digital Video Broadcasting (DVB); Interaction channel for satellite distribution systems".
- [8] ETSI TS 102 470-2: "Digital Video Broadcasting (DVB); IP Datacast: Program Specific Information (PSI)/Service Information (SI); Part 2: IP Datacast over DVB-SH".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI EN 302 550 (all parts and sub-parts): "Satellite Earth Stations and Systems (SES); Satellite Digital Radio (SDR) Systems".